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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/177,251	10/22/1998	ERIC C. ANDERSON	1062P/P180	2859

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EXAMINER

HARRIS, TIA M

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/177,251

Applicant(s)

ANDERSON, ERIC C.

Examiner

Tia M Harris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 27 August 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

The applicant's amendments to the specification have overcome the objections to the specification. Therefore, the objections are withdrawn.

The applicant's amendments to Claims 10 and 17 have overcome the objections presented in the previous office action. Therefore, the objections are withdrawn. The applicant has canceled claim 8, therefore, the objection to Claim 8 is now moot.

Claim Objections

1. Claims 1 and 10 are objected to because of the following informalities: the term "that" is repeated on line 8 of both claims. Appropriate correction is required.
2. Claim 7 is objected to because of the following informalities: the shifting step of claim 1 (which claim 7 depends from) is now step (d), not (c). Appropriate correction is required.

Drawings

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 8/27/02 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Response to Arguments

2. Applicant's arguments filed 8/27/02 have been fully considered but they are not persuasive. The applicant argues that the combination of cited references presented in the previous office action do not teach "determining whether the focus zone can be shifted so that the at least one object is out of focus if the at least one object is not out of focus". The examiner respectfully disagrees with this assessment of the cited art.

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The combined invention of Omata and Ikemori discloses a method of capturing an image using an image capture device, the image capable of including a plurality of objects, each of the plurality of objects being a corresponding distance from the imaging device. Ikemori further discloses shifting the focus zone so that at least one object is out of focus if at least one of the plurality of objects is not out of focus (Col 11, Lines 41-60). In order to be able to shift the focus zone as taught by Ikemori, it is inherent that the focus be determined to be shiftable. Therefore, the method comprises the step of determining that the focus zone can be shifted so that at least one object is out of focus if at least one object is not out of focus.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 4-7, 10-11, 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omata et al (6067114) (hereafter referred to as Omata) in view of Ikemori (4826301).

(Claims 1, 7, 10, 16-17) Omata discloses a method for capturing an image using an image capture device (Col 3, Lines 9-20), the image capable of including a plurality of objects (see Fig 5), each of the plurality of objects being a corresponding distance from the imaging device (Col 5, Lines 8-10, 16-17), the image being associated with a focus zone (Col 3, Lines 60-62; Col 5, Lines 18-21), the method comprising the steps of determining if the image matches at least one criteria by determining the corresponding distance for each of the plurality of objects (Col 5, Lines 8-10, 18-21), determining whether at least one of the plurality of objects is out of focus if the image matches the at least one criteria and shifting the focus zone by

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focusing the image on a selected main object (Col 4, Lines 12-15). Omata does not specifically disclose determining whether the focus zone can be shifted so that the at least one object is out of focus if the at least one object is not out of focus and shifting the focus zone so at least one object is out of focus.

Ikemori discloses a photographic system having a soft focus function wherein it is determined that the focus zone can be shifted so that at least one object is out of focus if the object is not out of focus, and shifting the focus zone so at least one object is out of focus. (Col 11, Lines 34-60).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the method of shifting the focus zone so at least one object is out of focus in the invention disclosed by Omata, as taught by Ikemori, to produce a special effect such as soft focus on the background of the image, which is well known in the art, so the main object (foreground image) would appear sharper.

(Claims 2, 11) Omata discloses the step of determining if an image matches at least one criterion by determining the corresponding distance for each of the plurality of objects (Col 5, Lines 8-10, 16-20).

(Claims 4, 13) Omata further discloses separating the image into a plurality of zones and analyzing the image in each of the plurality of zones to determine if the image matches the criteria (Col 3, Lines 34-35; Col 5, Lines 5-10, 18-21).

(Claims 5, 14) Omata further discloses determining the amount of each zone and a number of zones, which a particular object occupies (Col 5, Lines 55-67; Col 6, Lines 1-9).

(Claims 6, 15) Omata further discloses the image includes a center and at least one criterion includes a location of a particular object of the plurality of objects being in proximity to the center of the image (Col 4, Lines 25-29).

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(Claim 18) Omata also discloses the image capture device is a digital camera (Col 3, Lines 9-17).

(Claim 19) Omata further discloses a computer-readable medium containing a program for capturing an image capable of a plurality of objects, the program includes instructions for controlling the devices that determine if an image matches at least one criterion and determining whether at least one of the plurality of objects is out of focus (Col 3, Lines 54-67). Ikemori inherently discloses program instructions that control determining whether the focus zone can be shifted so that the at least one object is out of focus if the at least one object is not out of focus and shifting the focus zone so at least one object is out of focus (Col 11, Lines 34-60).

(Claims 20-21) Refer to rejection of Claims 7 and 17 above.

5. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omata in view of Ikemori as applied to claim 2 above, and further in view of Nagahata et al (5825016) (hereafter referred to as Nagahata).

The combined invention of Omata and Ikemori, discloses a method of capturing an image containing a plurality of objects, as discussed above. Both references disclose focusing on the background or foreground of an image (Omata – Col 1, Lines 24-28; Ikemori – Col 7, Lines 40-41), but do not specifically disclose categorizing the objects of an image as being located in the foreground or background of an image based on corresponding distances.

Nagahata discloses a focus detection device that can be used to capture an image containing a plurality of objects (see Fig 5). It is disclosed that the object, which is farther away from the camera, is considered to be in the background, and the object that is closest to the camera is considered to be in the foreground (Col 7, Lines 60-67; Col 8, Lines 1-5).

It is very well known in the art that an object farther away from a camera is considered to be in the background of an image, and an image closer to the camera would be considered to

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be in the foreground of the image. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made that since the cameras disclosed by Omata and Ikemori are both capable of capturing an image containing a plurality of objects, they would determine whether an object is in the foreground or background of an image based on the distances the objects are from the camera, in the manner taught by Nagahata, so the desired focusing of the objects in the image (such as soft focusing) could be correctly performed.

6. Claims 9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omata in view of Ikemori and Nagahata.

Omata discloses a method for allowing an image having a center to be captured by an imaging device (Col 3, Lines 9-20, Col 4, Lines 25-29), the image capable of including a plurality of objects (see Fig 5), each of the plurality of objects being a corresponding distance from the imaging device (Col 5, Lines 8-10, 16-17), the image being associated with a focus zone (Col 3, Lines 60-62; Col 5, Lines 18-21), the method comprising the steps of determining if the image matches at least one criteria by determining the corresponding distance for each of the plurality of objects (Col 5, Lines 8-10, 18-21), determining whether at least one of the plurality of objects is out of focus if the image matches the at least one criteria and shifting the focus zone by focusing the image on a selected main object (Col 4, Lines 12-15). Omata further discloses separating the image into a plurality of zones and analyzing the image in each of the plurality of zones to determine if the image matches the criteria (Col 3, Lines 34-35; Col 5, Lines 5-10, 18-21) and determining the amount of each zone and a number of zones, which a particular object occupies (Col 5, Lines 55-67; Col 6, Lines 1-9). Omata also discloses the image includes a center and at least one criterion includes a location of a particular object of the plurality of objects being in proximity to the center of the image (Col 4, Lines 25-29). Omata does not

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specifically disclose categorizing the objects of an image as being located in the foreground or background of an image based on corresponding distances and shifting the focus zone so at least one object is out of focus.

Nagahata discloses a focus detection device that can be used to capture an image containing a plurality of objects (see Fig 5). It is disclosed that the object, which is farther away from the camera, is considered to be in the background, and the object that is closest to the camera is considered to be in the foreground (Col 7, Lines 60-67; Col 8, Lines 1-5).

It is very well known in the art that an object farther away from a camera is considered to be in the background of an image, and an image closer to the camera would be considered to be in the foreground of the image. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made that since the camera disclosed by Omata is capable of capturing an image containing a plurality of objects, it would determine whether an object is in the foreground or background of an image based on the distances the objects are from the camera, in the manner taught by Nagahata, so the desired focusing of the objects in the image (such as soft focusing) could be correctly performed.

Ikemori discloses a photographic system having a soft focus function that discloses program instructions wherein it is determined that the focus zone can be shifted so that at least one object is out of focus if the object is not out of focus, and shifting the focus zone so at least one object is out of focus (Col 11, Lines 34-60).

Omata further discloses a computer-readable medium containing a program for capturing an image capable of a plurality of objects, the program includes instructions for controlling the devices that determine if an image matches at least one criterion, determining whether at least one of the plurality of objects is out of focus, and shifting the focus zone so the at least one object is out of focus if at least one of the plurality of subjects is not out of focus

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(Col 3, Lines 54-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the method of shifting the focus zone so at least one object is out of focus in the invention disclosed by Omata, as taught by Ikemori, to produce a special effect such as soft focus on the background of the image, which is well known in the art, so the main object (foreground image) would appear sharper.

7. Claims 23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omata in view of Ikemori as applied to claims 1, 10, and 19 above, respectively, and further in view of Wakabayashi et al (4825235) (hereafter referred to as Wakabayashi).

The combined invention of Omata and Ikemori discloses an image capturing method and device as discussed above, but does not specifically disclose adjusting the aperture size to shorten the focus zone if it is determined that the focus zone cannot be shifted so that the at least one object is out of focus.

Wakabayashi discloses a camera having a soft focus filter, wherein the aperture value is adjusted to improve the soft-tone effect by decreasing the depth of field (Col 18, Lines 38-48).

Only changing the aperture in the Wakabayashi reference creates soft focus effect. When focused on an object of interest, and a soft focus mode is desired, it would have been obvious to one having ordinary skill in the art at the time the invention was made to change only the aperture size in order that the object of interest would remain in focus during the soft focus effect.

8. Claims 24 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omata in view of Ikemori and Nagahata as applied to claims 9 and 22 above, and further in view of Wakabayashi.

The combined invention of Omata, Ikemori, and Nagahata discloses an image capturing method and device as discussed above, but does not specifically disclose adjusting the aperture

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size to shorten the focus zone if it is determined that the focus zone cannot be shifted so that the at least one object is out of focus.

Wakabayashi discloses a camera having a soft focus filter, wherein the aperture value is adjusted to improve the soft-tone effect by decreasing the depth of field (Col 18, Lines 38-48).

Only changing the aperture in the Wakabayashi reference creates soft focus effect. When focused on an object of interest, and a soft focus mode is desired, it would have been obvious to one having ordinary skill in the art at the time the invention was made to change only the aperture size in order that the object of interest would remain in focus during the soft focus effect.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

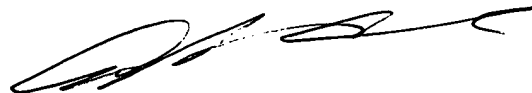
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tia M Harris whose telephone number is 703-305-4807. The examiner can normally be reached on M-F 8:30 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

tmh *TMH*
November 18, 2002



**ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**